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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,195	07/31/2003	Chun-Hung Lin	JCLA7907-CA	9823
23900	7590	11/03/2005	EXAMINER	
J C PATENTS, INC. 4 VENTURE, SUITE 250 IRVINE, CA 92618			PEUGH, BRIAN R	
			ART UNIT	PAPER NUMBER
			2187	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,195

Applicant(s)

LIN ET AL.

Examiner

Brian R. Peugh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-15 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,9,10,12-15 and 23 is/are rejected.
- 7) ☒ Claim(s) 5 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Office Action is in response to applicant's communication filed August 19, 2005 in response to PTO Office Action dated May 31, 2005. The applicant's remarks and amendment to the specification and/or claims were considered with the results that follow.

Claims 1, 3-10, 12-15, and 23 have been presented for examination in this application. In response to the last Office Action, claims 1, 9, and 13-15 have been amended. Claim 23 has been added.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 6, 7, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Roohparvar (US# 6,851,026).

Regarding claim 1, Roohparvar teaches a **reading method to a flash memory** [col. 6, lines 37-52] **from a data-access requesting component, wherein the flash memory includes a plurality of storage sectors** [col. 4, lines 12-35], **and a read operation to one sector of the storage sectors needs a plurality of stages handled by an access controller** [col. 11, lines 18-30], **the reading method comprising: performing a first read operation to read a current sector of the storage sectors; starting to perform a second read operation to a next sector of the storage sectors when the first read operation is not completed yet; and starting to perform a third read operation to read a further next sector of the storage sectors when the first read operation and the second read operation are not completed yet** [col. 11, line 54 – col. 12, line 17; Figure 8, all three cases], **wherein the second read operation starts before the first read operation ends thereby decreasing the time required to perform read operations and increasing overall system performance** [the burst operation of multiple sectors decreases the time for data retrieval as seen in Figure 8].

Regarding claim 3, Roohparvar teaches **wherein the stages includes a first stage for finding a sector of the storage sectors to be read** [READ command transmission], **a second stage for transmitting an information to be read from the flash memory into the access controller** [column address available for accessing

respective bank], **and a third stage for transmitting an information to be read in the access controller into the data-access requesting component** [DQ's provide valid data; col. 10, lines 16-60].

Regarding claim 4, Roohparvar teaches further **comprising recurrently performing the foregoing steps if another sector is still to be read** [as seen in figure 8, the read operations are progressively overlapped for pending read operations].

Regarding claim 6, Roohparvar teaches **wherein the third stage for the first read operation is overlapping with the second stage for the second read operation** [Fig. 8, first example].

Regarding claim 7, Roohparvar teaches **starting to perform a first stage of a third read operation to find out a further next sector of the storage sectors to be read when the first read operation and the second read are not completed yet** [Fig. 8, third example].

Regarding claim 23, Roohparvar teaches a **reading method to a flash memory** [col. 6, lines 37-52] **from a data-access requesting component, wherein the flash memory includes a plurality of storage sectors** [col. 4, lines 12-35], **and a read operation to one sector of the storage sectors needs a plurality of stages handled by an access controller** [col. 11, lines 18-30], **the reading method comprising:**

performing a first read operation to read a current sector of the storage sectors; starting to perform a second read operation to a next sector of the storage sectors when the first read operation is not completed yet; [col. 11, line 54 – col. 12, line 17; Figure 8, all three cases], wherein the stages includes a first stage for finding a sector of the storage sectors to be read [Figure 8, 2nd & 3rd cases; COMMAND 'READ' initialized at T0], a second stage for transmitting an information to be read from the flash memory into the access controller [ADDRESS line for loading bank information]; and a third stage for transmitting an information to be read in the access controller into the data-access requesting component [DQ data reading operation at T2 or T3] [col. 11, line54 – col. 12, line 30]; wherein the second read operation starts before the first read operation ends thereby decreasing the time required to perform read operations and increasing overall system performance [the burst operation of multiple sectors decreases the time for data retrieval as seen in Figure 8].

Claims 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Fandrich et al. (US# 5,519,847).

Regarding claim 9, Fandrich et al. teaches a **writing method to a flash memory [Fig. 2, (20)] from a data-access requesting component, wherein the flash memory includes a plurality of storage sectors [memory cells; col. 2, lines 63-64], and a writing operation to one sector of the storage sectors needs a plurality of stages handled by an access controller, the writing method comprising [col. 1, lines 56-**

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59]: **performing a first writing operation to write a current sector of the storage sectors** [col. 6, lines 19-26; Fig. 6, (404); Fig. 8, T1-T2 sequence]; **and starting to perform a second writing operation to a next sector of the storage sectors when the first writing operation is not completed yet** [col. 6, lines 57-61; Fig. 6, (406); Fig. 8, T2-T3 sequences, upper sequence for 2nd writing op., lower sequence for 1st writing op.] ; **wherein the second writing operation starts before the first writing operation ends thereby decreasing the time required to perform writing operations and increasing the overall system performance** [col. 1, lines 49-67; start of 2nd op. (upper T2-T3 sequence) occurs during writing of 1st op. (450), lower T2-T3 sequence] ; **wherein the stages includes a first stage for transmitting an information to be written into the access controller** [col. 6, lines 19-26], **a second stage for finding a sector of the storage sectors in the flash memory to be written** [col. 6, lines 57-61] **and a third stage for transmitting an information in the access controller into the flash memory** [col. 6, lines 62-66] [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2; lower sequence 'Program from Plane (A or B)' corresponds to stage 3].

Regarding claim 10, Fandrich et al. teaches **starting to perform a third writing operation** [Fig. 8, T3-T4 upper sequence] **to write a further next sector of the storage sectors when the second writing operation is not completed yet** [Fig. 8, T3-T4 lower sequence].

Regarding claim 12, Fandrich et al. teaches **recurrently performing the foregoing steps if another sector is still to be written** [Fig. 6, step (410); col. 7, lines 35-40].

Regarding claim 13, Fandrich et al. teaches **wherein the third stage for the first writing operation is overlapping with the first stage of the second writing operation** [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2; lower sequence 'Program from Plane (A or B)' corresponds to stage 3].

Regarding claim 14, Fandrich et al. teaches **wherein the first stage and the second stage for the same writing operation are overlapping** [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2].

Regarding claim 15, Fandrich et al. teaches **wherein the third stage of the first writing operation, the first stage for the second writing operation, and the second stage for the second writing operation are overlapping** [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2; lower sequence 'Program from Plane (A or B)' corresponds to stage 3].

Allowable Subject Matter

Claims 5 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 4, 6, 7, and 23 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 8/19/05 have been fully considered but they are not persuasive. Regarding Applicant's arguments that the Fandrich reference does not teach the three stages of claims 9, 10, and 12-15, the Examiner would like to point out that the breadth of the claimed subject matter of claim 9 allows for the claim to be interpreted in ways not entirely disclosed by the Applicant. As seen in figure 8, for a first write operation, the first stage refers to 'LOAD PLANE A', the second stage as "& GIVE PROGRAM COMMAND", and the third stage as 'PROGRAM FROM PLANE A' [col. 6, lines 54-61; col. 6, lines 63-66 & col. 7, lines 10-14; col. 7, lines 20-25].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Peugh whose telephone number is (571) 272-4199. The examiner can normally be reached on Monday-Thursday from 7:00am to

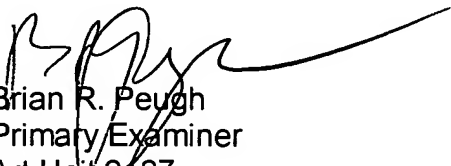
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4:30pm. The examiner can also be reached on alternate Friday's from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks, can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian R. Peugh
Primary Examiner
Art Unit 2187
October 31, 2005